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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/862,947	05/22/2001	Joachim Gloger	510.1007	9743

7590

10/23/2002

DAVIDSON, DAVIDSON & KAPPEL, LLC  
14th Floor  
485 Seventh Avenue  
New York, NY 10018

EXAMINER

TANG, SON M

ART UNIT

PAPER NUMBER

2632

DATE MAILED: 10/23/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/862,947

Applicant(s)

GLOGER ET AL.

Examiner

Son M Tang

Art Unit

2632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

### ***Drawings***

#### **The drawings are objected to because**

Figure 1, all numeric blocks need to be labeled with descriptive legends according to 37CFR 1.84(o). Correction is required.

### ***Claim Rejections - 35 USC § 112***

1. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear that in the preamble line 1, wherein "a function of camera images so as to determine the distance from the observer" however, the support step of line 3 applicants claimed "identifying regions within a two-dimensional camera image that is not resolved with respect to distance" what is means by not resolved? Is that means the distance is not determined, not involved or not needed? Examiner found that the features are not connected. Please provide further define.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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2. Claims 1-6, 8-9 and 11- 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hayashi et al.** [US 6,134,497] in view of **Brady et al.** [US 5,761,326].

As to claims 15-16: **Hayashi et al.** disclose a device for detecting and recognizing objects on the road as a function of camera images so as to determine their distance from an observer comprising:

-a distance-measuring sensor unit [2];

-an image camera [4] coupled to a main control device [50] where is interposed between the camera and the distance-measuring sensor unit, [Fig. 1, col. 3, lines 20-30] wherein the main control device is used to recognize an object based on information received from the laser radar [2] and camera [4] includes a distance and relative velocity in relation to the observer [col. 4, lines 21-38], since there is only one camera [4], is a mono-camera and it is obviously contains two-dimensional image information without any distance information.

Hayashi et al. fail to specify wherein the main control device comprises a first classifying unit interposed between the sensor unit and the camera and a second classifying unit downstream from the sensor unit and the camera.

Brady et al. teach a classifying and tracking system which comprising a first classifying unit met by a region module [46 & 47] and a second classifying [52] [Fig. 3, col. 7, lines 35-68 and col. 8, lines 1-23] and [col. 9, lines 50-68]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use two classifying units for enhancing a better identification of the obstacles or vehicle, which increasing the safety for driver.

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As to claim 17: **Hayashi et al.** further disclose a risk calculator is connected to the recognized output of the unit [50] [as shown in Fig. 3, col. 5, lines 1-65].

As to claims 18-19: **Hayashi et al.** further disclose the device is located in a vehicle and used for early detection of accident situation [Fig. 1].

As to claims 4 and 10: **Hayashi et al.** disclose the instant claimed invention except for: the classifier is a hyperpermutation network and a radial-basis function designed for recognizing road users. However, as long as the classifier is being classified, employing any type of classifier for performing the same function would not constitute an inventive step but an obvious of design choice. Since applicant has not disclosed that hyperpermutation network and radial-basic classifiers are solve any stated problem or is for any particular purpose and it appears that one of ordinary skill in the art at the time the invention was made to employ any well-known type of device, such as hyperpermutation network and radial-basic classifier in the above combination for classifying the object as desired.

As to claims 1-3, 5-6 and 11-14: the claimed method steps are interpreted and rejected as rejection stated above.

3. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hayashi et al.** and **Brady et al.** as applied to claims 15-16 above, and further in view of **Asayama** [US 5,424,952].

As to claims 7-9: **Hayashi et al.**, as modified, disclose the instant claimed invention except for: the mono-camera system is able to measure distance.

**Asayama** teaches a mono-stereo camera [23] which is able to detect distance from the vehicle to the image [Fig. 5-6, col. 3, lines 25-30, col. 4, lines 54-68]. It would have been

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obvious to one having ordinary skill in the art at the time the invention was made to use a single camera, which can be able to capture image and detect distance at the same time as suggested by Asayama for the advantage of less cost.

*Conclusion*

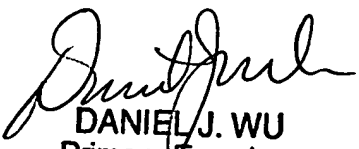
4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shima et al. [US 5,555,312], Pochmuller [6,362,773], Gutta et al. [US 6,424,272] Franke et al. [US 6,292,752], Tsutsumi et al. [US 5,617,085].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son M Tang whose telephone number is (703)306-5970. The examiner can normally be reached on 4/9 First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J Wu can be reached on (703)308-6730. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3988 for regular communications and (703)305-3988 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

Son Tang  
October 18, 2002

  
DANIEL J. WU  
Primary Examiner  
10/18/02